Recruitment was generally greater in the high salinity sites, compared to the low salinity sites. Recruitment was less at shallow depths compared to deeper depths. In all three years the highest recruitment occurred in August and September, corresponding to the months of maximum water temperature. Recruitment was highly variable in space and time, but appeared to diminish from 1988 to 1990. Recruitment was reduced by sedimentation and a variety of sessile organisms. All sites appeared to have a similar potential for growth.

RECOMMENDATIONS

1. As nearly as possible, cultch planting should be done in the fall (August-September), when oyster recruitment is highest.

2. Except when local conditions produce high quality oysters in very shallow waters, cultch planting should be restricted to deeper depths (>1-2 m) where oyster recruitment is highest.

3. The NCDMF should consider a program of transplanting spat from "seed" areas of high recruitment to "grow-out" areas where present recruitment might be lower. Such a program would require initial studies of cost/benefit ratios, including oyster survival and the possible transfer of oyster diseases.

4. There is a clear need for more detailed information on the recruitment and survival of oysters in North Carolina waters. Such data are necessary in order to make sure cultch is planted at all suitable sites and to implement the transplanting program suggested above.

5. Recruitment must be related to the location and density of existing beds in order to understand the high spatial and temporal variation in recruitment. A survey of the location and extent of adult oyster stocks in North Carolina is a necessary precursor to this effort.